BNSF Crude-by-Rail

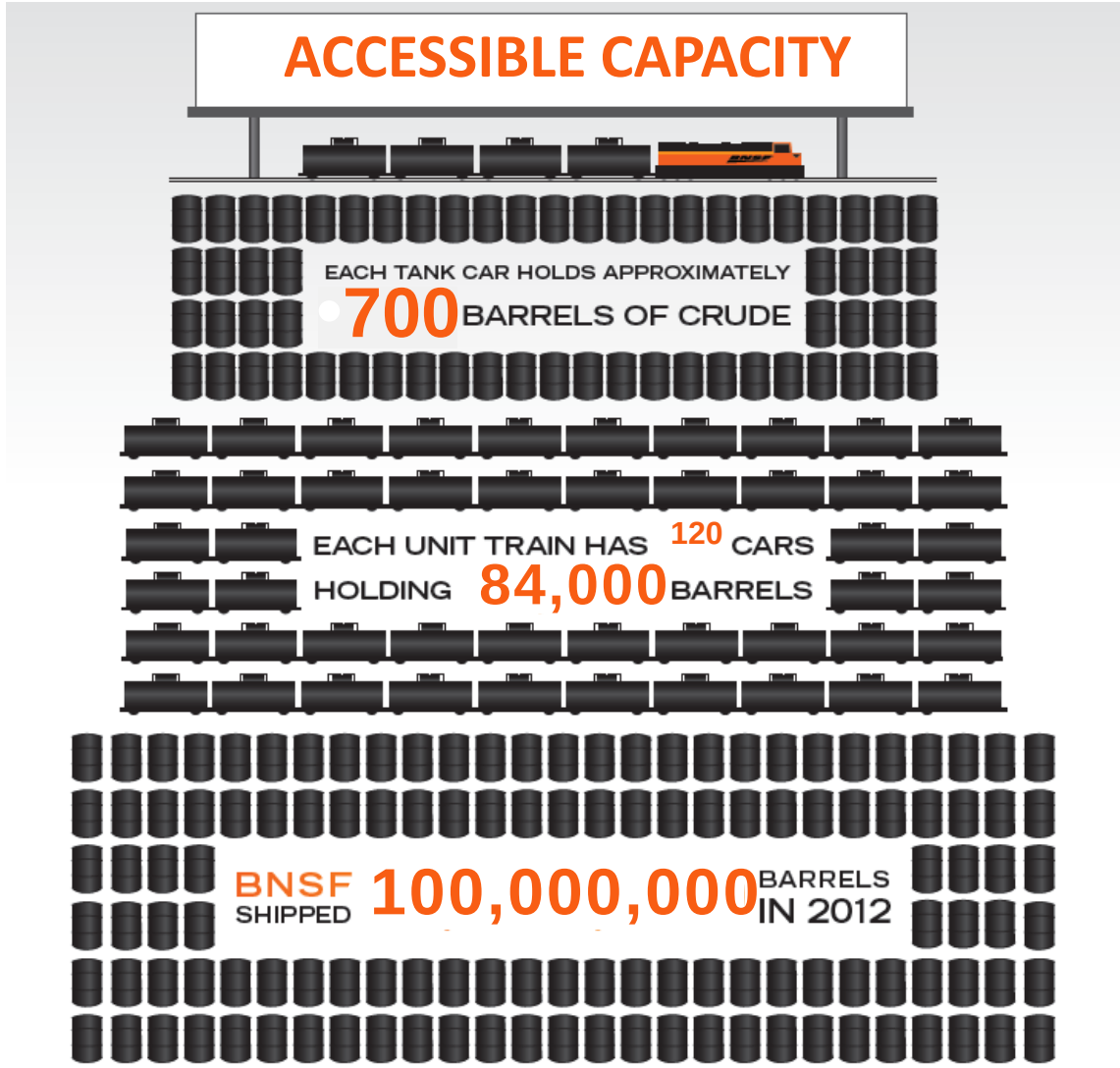
Partnership in Safety

Patrick Brady CIH, CSP
Assistant Director Hazmat

BNSF RAILWAY

Vast and Readily Accessible Capacity

BNSF Railway is hauling more than **600,000 barrels per day of crude** across our network



BNSF Safety Vision

We believe every accident or injury is preventable. Our vision is that BNSF will **operate free of accidents and injuries.**

BNSF will achieve this vision through:

- Culture
- Work Environment
- Work Practices and Training
- Empowered Work Force

BNSF Safety Strategies and Tactics

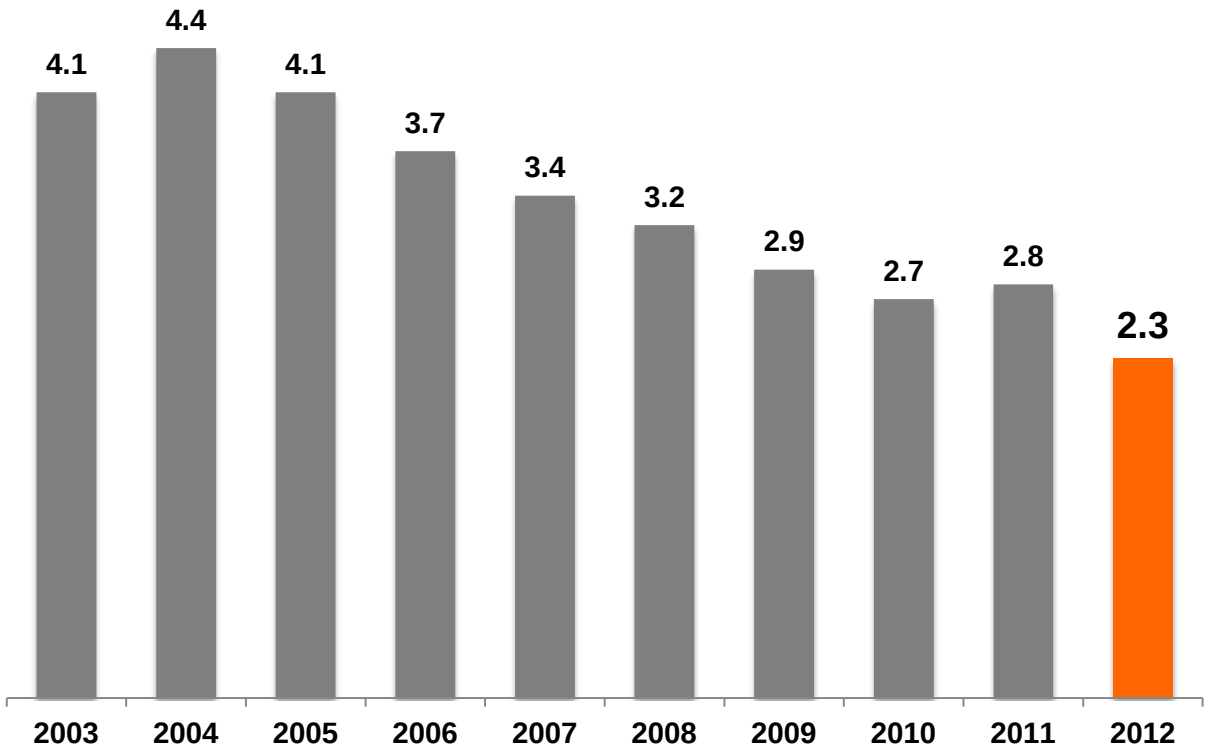
We believe that every accident and injury is preventable and that employees are empowered to work safely. Our vision is to conduct BNSF operations without accident and injuries.

- Established local safety teams develop goals, action plans and rewards. These pyramid up to Division plans.
- Local observation teams note daily behaviors (labor organizations now support this concept)
- Job Safety Briefings and Safety Bulletins issued as events occur
- Safety Issue Resolution Process (SIRP) used for identified or anonymous reporting of issues (phone and/or email)
- Behavior-based safety concepts being utilized
- Fatigue management programs being developed (federal mandate)

2012: Safest Year in History

Reportable incidents are declining to record-low levels

Industry Reportable Rail Equipment Incident Rate *(Incidents per Million Train Miles)*



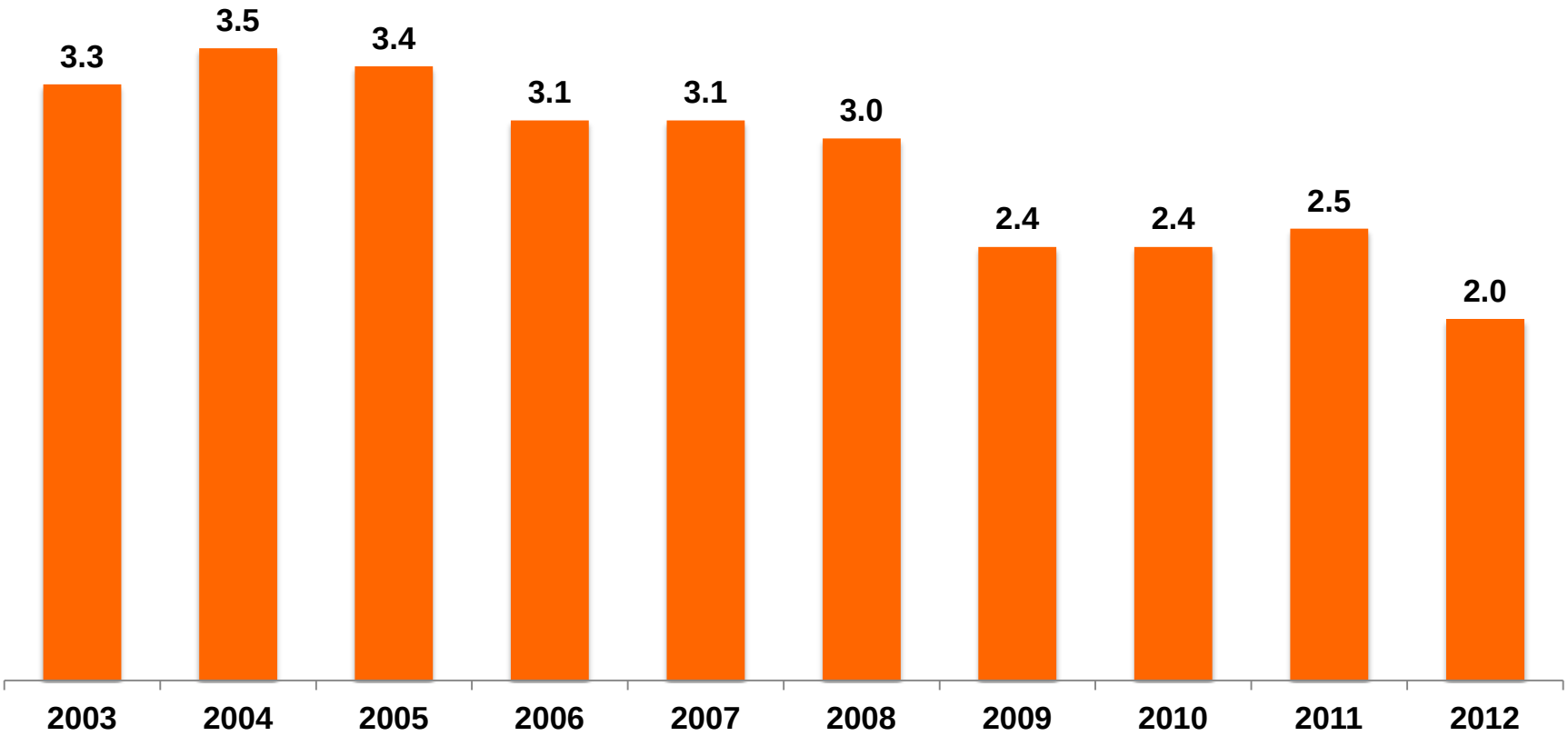
- **From 1980 to 2012 in the rail industry:**
  - Train accident rates fell 80%
  - Rail employee injury rates fell 84%
  - Crossing collision rates fell 81%

Source: FRA.gov- 1.06 – Ten Year Accident/Incident Overview by Railroad

BNSF: A Safety Leader

Incident rate consistently lower than industry average

BNSF Reportable Rail Equipment Incident Rate *(Incidents per Million Train Miles)*



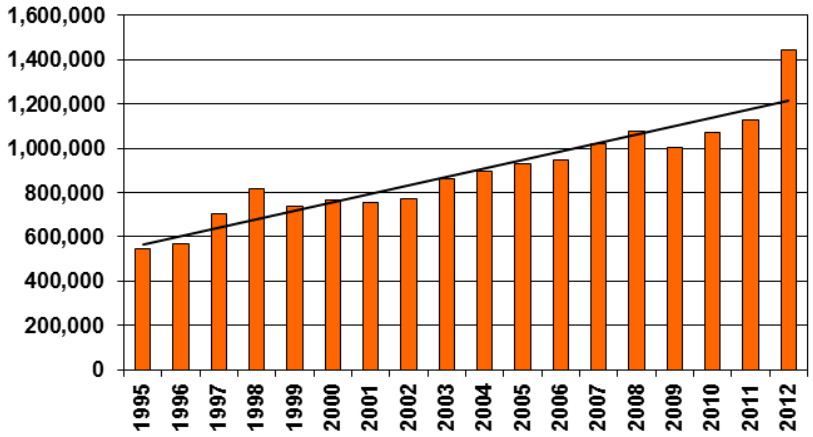
Safe & Reliable Crude Oil Rail Transportation

Rail is one of the safest ways to transport crude oil and hazardous materials

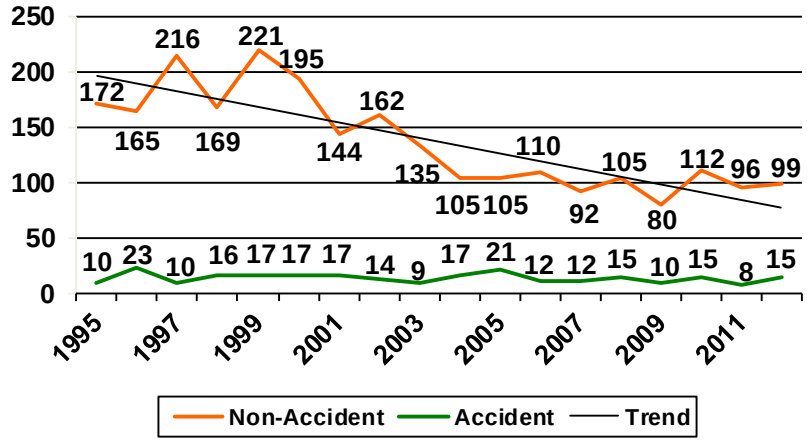
99.997% of rail industry shipments of hazardous materials reach their destination without a release caused by a train accident

BNSF hazmat releases continue to decline even as volumes grow

BNSF Number of Hazmat Shipments



BNSF Total Hazmat Releases



Properties and Hazards

- **Flammability**
  - **DOT Flammable Liquid – Flashpoint <140ºF**
  - **DOT Combustible Liquid – Flashpoint 140 to 200ºF**
  - **Non Regulated – Flashpoint >200ºF**
- **Packing Groups**

Class 3 (Flammable) Packing Groups		
Packing Group	**Flash Point (Closed-Cup)**	**Initial Boiling Point**
I		<=35°C (95°F)
II	<23°C (73°F)	>35°C (95°F)
III	>=23°C, <=60°C (140°F)	>35°C (95°F)

Low Pressure Tank Car – DOT 111A100W1

“New” vs. Old Cars

- **1/2” vs. 7/16”**
- **½” Head Shield**
- **Roll Over Protection**
- **Larger Pressure Valve**
- **50% better crashworthiness**

DOT ANPRM – AAR Comments

- **Phase out of “old style” DOT 111 tank car**
- **Require jackets and thermal protection on the “new style cars”**
- **Prevent the reclassification flammable liquids to combustible liquids.**

Quebec Crude Oil Derailment

- **Derailment/impact speed was greater than 65 MPH on a 10 MPH Track**
- **50 Dead**
- **None of the cars involved in the derailment were the enhanced DOT111 railcar design**
- **Reported that over 1.5 million gallons of crude released**
- **30,000 gallons of crude impacted a river**
- **“River of burning crude” progressed through town igniting homes, apartments and night club**
- **Secondary explosions were potentially a result of burning crude coming into contact with natural gas services and/or propane storage tanks; potential for heat induced tear and/or a fuel / air explosion may have also existed**

THE TRAIN *Parked pointing downhill in Nantes, Que., roughly a kilometre and a half long. The 72 tank cars - filled with North Dakota crude oil destined for a refinery in New Brunswick - weighed between 122 - 128 tonnes each. Led by five diesel engines and a "buffer car," the whole train totaled around 10,000 tonnes.*

THE EXPLOSION *When the unmanned train made its 101 km/h entrance into Lac-Mégantic, experts believe it had gained billions of kilojoules of energy—turning the runaway locomotive into the equivalent of 900 tonnes of TNT.*

DERAILED & BURNED | DERAILED | REMAINED INTACT

THE NIGHT A TRAIN DESTROYED A TOWN

In the aftermath of the Lac-Mégantic train derailment that levelled the downtown, killed 37 and left 13 presumed dead, the National Post takes an in-depth look at the inner workings of a runaway train, its path and impact and what could have been done to stop it.

THE TIMELINE IN NANTES

▮ Sometime around 11 p.m. on July 5, engineer Tom Harding parks the New Brunswick-bound train in Nantes on a routine stopover. According to the railway operator—Montreal, Maine & Atlantic Rail (MMA)—Mr. Harding turns off all but the lead engine to ensure the air brake system continues to operate.

▮ Taxi driver Andre Turcotte arrives at the train to pick up Mr. Harding and drive him to a Lac-Mégantic hotel. The driver, who picks the engineer up once or twice a week, notices more smoke than usual coming from the train. Oil droplets from the smoke land on his car, he says.

▮ During their ride to l'eau Berge Lac-Mégantic, Mr. Turcotte presses the train driver on the potential environmental hazards of the smoking locomotive. Mr. Harding says he's following company directives.

▮ The number of hand brakes engaged on the train is in dispute. Each railcar is outfitted with the manually operated system—the equivalent to a car's emergency brake. MMA officials initially reported that Mr. Harding activated 11 hand brakes, but chairman Edward Burkhardt said later that such an account was implausible.

▮ The train is left on a main rail line – because another train is parked in the siding "When equipment is left at any point," reads Canadian Rail Operating Rules, "a sufficient number of hand brakes must be applied to prevent it from moving."

▮ Residents in Nantes see smoke billowing from the unmanned train before 11:30 p.m. and call emergency services. According to French-language radio station CHMP-FM, passing motorists were forced to slow down as they drove through thick puffs of exhaust and smoke from the train.

▮ The Nantes fire department arrives on scene approximately 15 minutes later. The cause of the fire is reportedly a ruptured oil or fuel line on the only running locomotive. According to Fire Chief Patrick Lambert, firefighters power down the engine before attending to the flames—as they learned to do in joint training with MMA staff.

▮ The fire is reported to rail traffic control at approximately 11:50 p.m., according to the Transportation Safety Board of Canada. MMA dispatches a track maintenance employee to the scene.

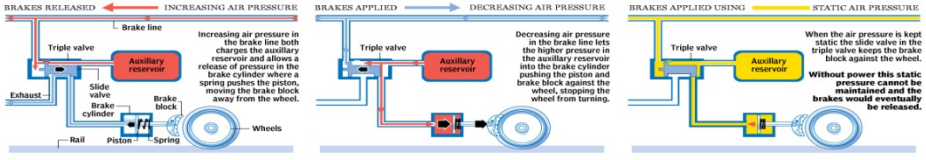
▮ The fire is completely extinguished by 12:15 a.m. The crew of 12 firefighters departs shortly after, leaving the train in custody of the MMA representatives. "MMA told the leading fire officer that everything was OK, the fire was out, everything was secure, you guys can leave," says Chief Lambert.

▮ Firefighters and MMA employees have vacated the scene by 12:56 a.m., when the train starts to move. "I felt the vibration of a train moving down the track," says nearby resident Andre Gendron. "I then saw the train move by without its lights on."

THE BRAKES

In the days following the crash, railway owner Montreal, Maine & Atlantic posited that the train's air-brake system may have failed after emergency responders at an earlier fire turned off the only running locomotive. The Post examines how the system works.

SIMPLIFIED SCHEMATIC OF A TRAIN'S AIR BRAKE SYSTEM

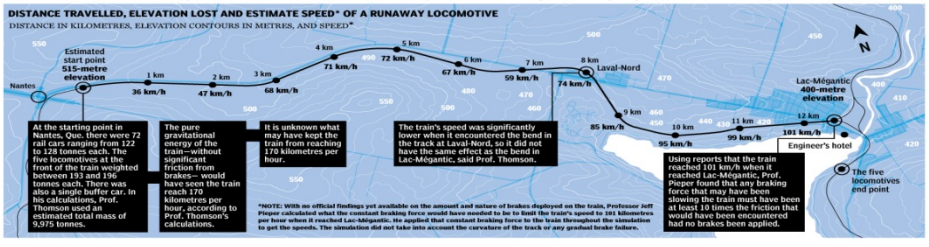


THE SPEED

Using data provided by the National Post, mechanical engineering professor Jeff Pieper at the University of Calgary and David Thomson, a Queen's University mathematician, have worked to create a general simulation of the train's path from Nantes to Lac-Mégantic.

DISTANCE TRAVELLED, ELEVATION LOST AND ESTIMATE SPEED* OF A RUNAWAY LOCOMOTIVE

DISTANCE IN KILOMETRES, ELEVATION CONTOURS IN METRES, AND SPEED*



At the starting point in Nantes, Que. there were 72 rail cars ranging from 122 to 128 tonnes each. The five locomotives at the front of the train weighted between 193 and 196 tonnes each. There was also a single buffer car, in his calculations, Prof. Thomson used an estimated total mass of 9,975 tonnes.

The pure gravitational energy of the train—without significant friction from brakes— would have seen the train reach 170 kilometres per hour, according to Prof. Thomson's calculations.

It is unknown what may have kept the train from reaching 170 kilometres per hour.

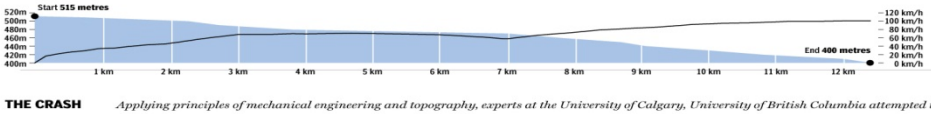
The train's speed was significantly lower when it encountered the bend in the track at Laval-Nord, so it did not have the same effect as the bend in Lac-Mégantic, said Prof. Thomson.

Using reports that the train reached 101 km/h when it reached Lac-Mégantic, Prof. Pieper found that any braking force that may have been slowing the train must have been at least 10 times the friction that would have been encountered had no brakes been applied.

*NOTE: With no official findings yet available on the amount and nature of brakes deployed on the train, Professor Jeff Pieper calculated what the constant braking force would have needed to be to limit the train's speed to 101 kilometres per hour when it reached Lac-Mégantic. He applied that constant braking force to the train throughout the simulation to get the speeds. The simulation did not take into account the curvature of the track or any gradual brake failure.

DISTANCE TRAVELLED AND ELEVATION LOST

ELEVATION IN METRES (NOTE ELEVATION IS NOT TO SCALE) & DISTANCE IN KILOMETRES



ESTIMATED SPEED

IN KILOMETRES PER HOUR

THE OIL TANKS

THE DOT-111A TANK CAR

Class 111A tank cars, built to DOT-111A specifications in the United States or TC or CTC-111A specifications in Canada, are used to transport flammable liquids, acids and other corrosives. They often fail during derailments.

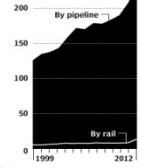
These cars are commonly referred to as non-pressure tank cars. They normally have no head shields or protective housing to protect top fittings from impact damage. The tank shells are often the minimum specified thickness of 11mm. Class 112 and 114 cars, on the other hand, have head shields and thicker tank shells.

MOVING CRUDE OIL THROUGH CANADA

The amount of oil moved by rail in Canada is barely 3% of the amount moved by pipeline each year, but movement by rail has increased dramatically.

CRUDE OIL MOVEMENT

MILLIONS OF TONNES

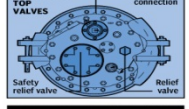


DOT-111 tanks slope down 50mm towards the middle to aid draining.

100,000 LITRES OF CRUDE OIL PER TANK CAR

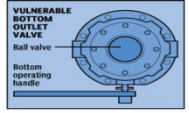
DOT-111A Top Housings are not effective in resisting the forces of a rollover derailment and often break off.

VULNERABLE TOP VALVES



DOT-111A Bottom Operating Handles have become caught by debris which caused valves to open. And the handles were found to be too robust and did not break free during derailment.

VULNERABLE BOTTOM OUTLET VALVE



VULNERABLE TANK THICKNESS

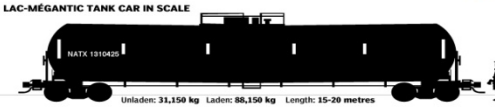
DOT-111A current tanks are 11mm thick and may be constructed from carbon steel, aluminum alloy, high alloy steel or nickel plate steel. Beginning on October 1, 2011, the new standard for DOT-111A tank cars requires tank heads and shells of thicker steel. It also requires that heads and shells be constructed of steel that has been tested above its maximum critical temperature.

Data collected by the TSB on accidents suggest 60% of releases of products from DOT-111A tank cars were through damaged top fittings; over 25% were due to car structural failure, mainly from punctures; and about 10% of releases were through damaged bottom fittings.

DOT-111 tank ends are especially vulnerable to tears from couplers that can fly up after ripping off between cars.

HAND BRAKE

LAC-MÉGANTIC TANK CAR IN SCALE

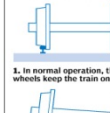


Unladen: **31,150 kg** Laden: **88,150 kg** Length: **15-20 metres**

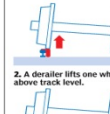
SAFETY MEASURES THAT COULD HAVE SAVED LIVES

▮ **THE SIDING:** Had the engineer parked the train in the siding the train might have derailed at a slow speed as it entered the main line.

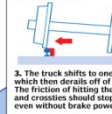
▮ **DERAILERS:** A device applied to a track that will derail a train in situations where more damage could be done if it rolled away, or derailed at a greater speed. While they can cause damage to equipment and tracks, it is a preventative measure aimed at reducing damage.



1. In normal operation, the flanged wheels keep the train on the rails.



2. A derailer lifts one wheel above track level.



3. The truck shifts to one side which then derails off of the track. The friction of hitting the ballast and crossties should stop the train even without brake power.

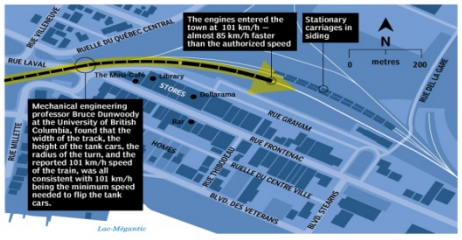
▮ **HAND BRAKES:** These are applied by hand and are on every car and locomotive. They lock the brakes on the car to prevent it from moving. The number required varies with the size and weight of the train and the grade of the rails.

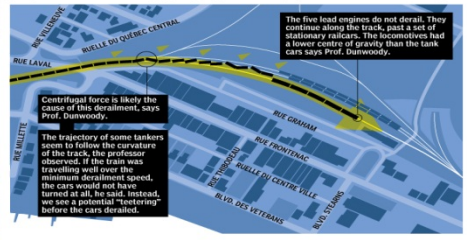
▮ **RESET SAFETY CONTROLS:** Reset Safety Controls require some sort of action from the engineer within a given time period — or the brakes will automatically lock.

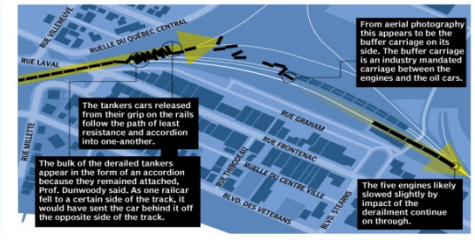
▮ **POSITIVE TRAIN CONTROLS:** Will automatically stop a train if it is travelling at an unauthorized speed at any given point on a track. The U.S. has passed legislation to have PTCs installed on all corridors on which passengers or hazardous materials are transported by 2015.

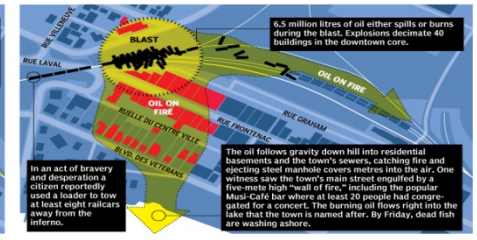
THE CRASH

Applying principles of mechanical engineering and topography, experts at the University of Calgary, University of British Columbia attempted to pinpoint the factors involved in the train's derailment.









THE TIMELINE IN LAC-MÉGANTIC

▮ Preliminary data pulled from the locomotive's black box recorder clocks the runaway train at 101 km/h as it arrived in downtown Lac- Mégantic just before 1:14 a.m., TSB inspector Donald Ross said earlier this week.

▮ Yannick Gagné was at his home in Lac-Mégantic at 1:15 a.m., having left his downtown bar and restaurant less than an hour earlier to relieve a babysitter. He urged his wife, who was collecting cover charge for a concert in the bar, to follow suit. The couple was getting ready for bed when the MMA train derailed and tank cars ignited, trapping patrons inside and turning their Musi-Café into ground zero.

▮ Approximately 40 buildings in Lac-Megantic's downtown core were destroyed in the blasts and fires. By Monday, the official death toll had risen to 37 people, with a remaining 13 missing and presumed dead. Police this week asked family members of the missing to provide DNA samples and dental records to assist in identifying remains.

▮ The explosions roused engineer Tom Harding from his hotel room. "I looked at him and I didn't say a word or anything because he looked very, very, very shaken up," recalled a receptionist at l'eau Berge inn. Borrowing firefighter's equipment, Mr. Harding reportedly assisted in pulling the rear railcars away from the flames, MMA said.

▮ Explosions sprayed oil hundreds of metres high. A total of 6.5 million litres of oil either spilled or burnt during the derailment, MMA told Environment Quebec. Oil streamed into the sewer system, with fire following after it—ejecting manhole covers and sending flames 10 metres in the air.

▮ Six minutes after he was awoken by the blasts, local contractor Raymond Lafontaine used a front-end loader to pour gravel into manholes and smash buildings to block the path of the burning oil.

▮ One official estimated that 1-million litres of oil remain in the railcars. Deputy Environment Quebec minister Michel Rousseau said 400,000 litres of oil have been pumped out of the sewers and 4-million litres of oil-tainted river and lake water have been recovered. But cleanup crews still await the conclusion of a police investigation before a major, months-long decontamination process can begin. Initially 2,000 people were evacuated from the area following the explosions, with 1,200 allowed to return on Tuesday and an additional 600 permitted access on Thursday.

▮ On the day of the crash, MMA reported that 13 oil-laden railcars were rescued from the rear of the train. On Wednesday, a National Post reporter counted eight salvaged tanker cars on tracks outside Lac-Mégantic. The five lead locomotives continued along the track following the derailment and are found by investigators on tracks more than a kilometre away from the crash site.

▮ Media and angry citizens barraged MMA chairman Edward Burkhardt at an impromptu press conference on Wednesday, where he said his employee, Mr. Harding, may have neglected to activate the train's hand brakes before leaving for his hotel and has been suspended without pay. Before exiting via police car for a four-hour questioning, the chairman said he plans to continue running trains through the town.

▮ Sûreté du Québec (SQ) identified the first victim on Sunday—93-year-old Eliane Parenteau, who lived near the train tracks. A team of 30 grief counselors, 200 SQ officers, 50 Red Cross personnel and 20 TSB investigators were in Lac-Mégantic as of Friday.

SOURCES: CANADIAN PRESS, POSTMEDIA, THE MONTREAL GAZETTE, REUTERS, THE CANADIAN & U.S. TRANSPORTATION SAFETY BOARDS, STATISTICS CANADA, AMERICAN RAILCAR INDUSTRIES, RAILROADNET, MONTREAL, MAINE & ATLANTIC RAILWAY, THE UNIVERSITY OF CALGARY, THE UNIVERSITY OF BRITISH COLUMBIA, AND BRANDON UNIVERSITY AND QUEEN'S UNIVERSITY

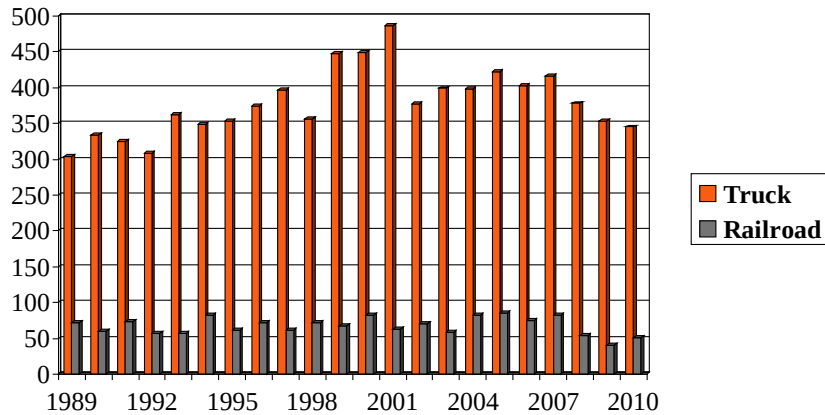
GRAEME HAMILTON, TRISTIN HOPPER, PETER KUITENBROUWER, JONATHON RIVAT, MIKE FAILLE, ANDREW BAHL, SCOTT DEVEAU, JAKE EDMISTON AND RICHARD JOHNSON / NATIONAL POST

Hazardous Materials Transport

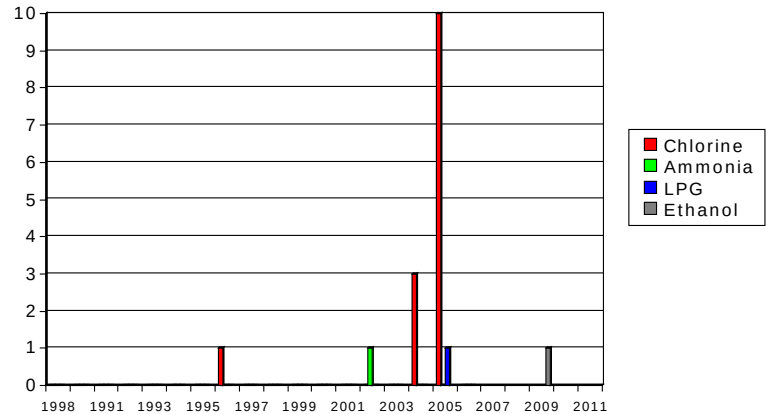
As common carriers, railroads are required under federal law to move hazardous materials

- Virtually all are shipped without an accident release (99.998%)
- Hazmat accident rates have declined by 90% since 1980 and nearly 50% since 1990
- Moving hazardous materials by rail is 16 times safer than moving them on the roads
- Railroads incurred 17 fatalities in since 1989 while trucks average nearly 11 annually. BNSF had none.

Serious Incidents
Rail and Truck (1989-2010)



Hazardous Materials Fatalities in Rail Incidents (1989-2011)



Key Train Operating Practice Changes

- **The FRA has issued a new Emergency Order and Safety Advisory**
- **As a result, BNSF and the rail industry will take the following additional actions:**
  - Key Trains carrying 1 TIH and or 20 loads of any hazmat, including crude oil and ethanol. Special handling; 50 MPH, stay on main track, special handling of fail equipment warnings
  - Key Trains will not be left unattended on main line or siding tracks
  - Lead locomotive to be locked and the operating control handle removed
  - All relevant information for the securement of Key Trains must be recorded, verified and confirmed between the train crew and dispatcher including number of handbrakes applied, the train's tonnage, weather and grade
  - Trains required to re-secured after "actions" by local responders

Emergency Planning

“By failing to prepare, you are preparing to fail”

- Benjamin Franklin -

SYSTEM EMERGENCY RESPONSE PLAN

Incident Notification

Service Interruption Desk (SID) ⟷ **First Call** ⟷ **Resource Operations Communications Center (ROCC)**

Dispatchers:
Trick, Chief

Svc Region/Division:
AVP if merited.
Supt, Asst Supt, Supt Opns,
RFE, Tmstr, Roadmaster

NOC personnel:
GST / AGST, Corridor
Supt, Signal, Mechanical,
Maint. Of Way

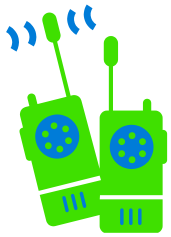
Foreign Line Railroad
(when involved)

Federal and State Agencies:
FRA, NTSB, EPA, DOT,
Commerce Commission, etc.

Shipper, CHEMTREC,
Canutec, etc
Shipper Protocol - See H

BNSF Hazmat
BNSF Environmental:
(when lading/fuel spilled)

BNSF Responsible Care:
(IF spill involved)



Civil Emergency
Response Agencies

Resource Protection
Special Agent

Damage Prevention
(IF loads involved)

General Claims

Freight Claims
(IF loads involved)

AAR, Monica Cicioni
(IF Military Shipment
involved) NO VMX

BNSF Corporate Relations

BNSF's – Geographical Response Plan (GRPs)

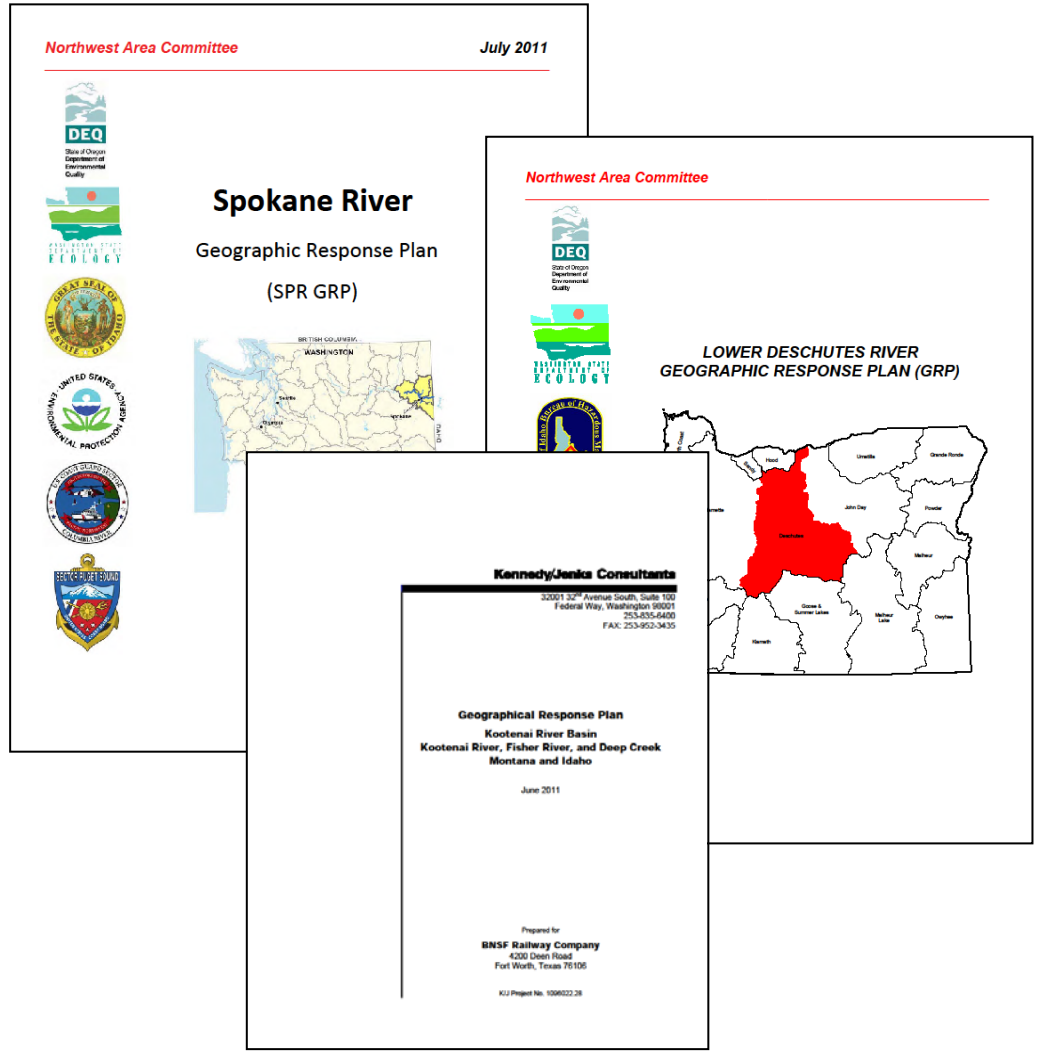
Provides specific response strategies to protect rivers or other large environmentally sensitive areas

Completed

- **Deschutes River**
- **Kootenai River**
- **Spokane River**
- **Wind River**
- **Flathead River**
- **Copper River Subdivision**

Under Construction

- **Lower Colorado**
- **Upper Colorado**
- **Pacific Northwest – GRP to BNSF mile post inventory**
- **Mississippi – MN/WI**
- **Middle Fork Flat Head River**



BNSF Emergency Response Team

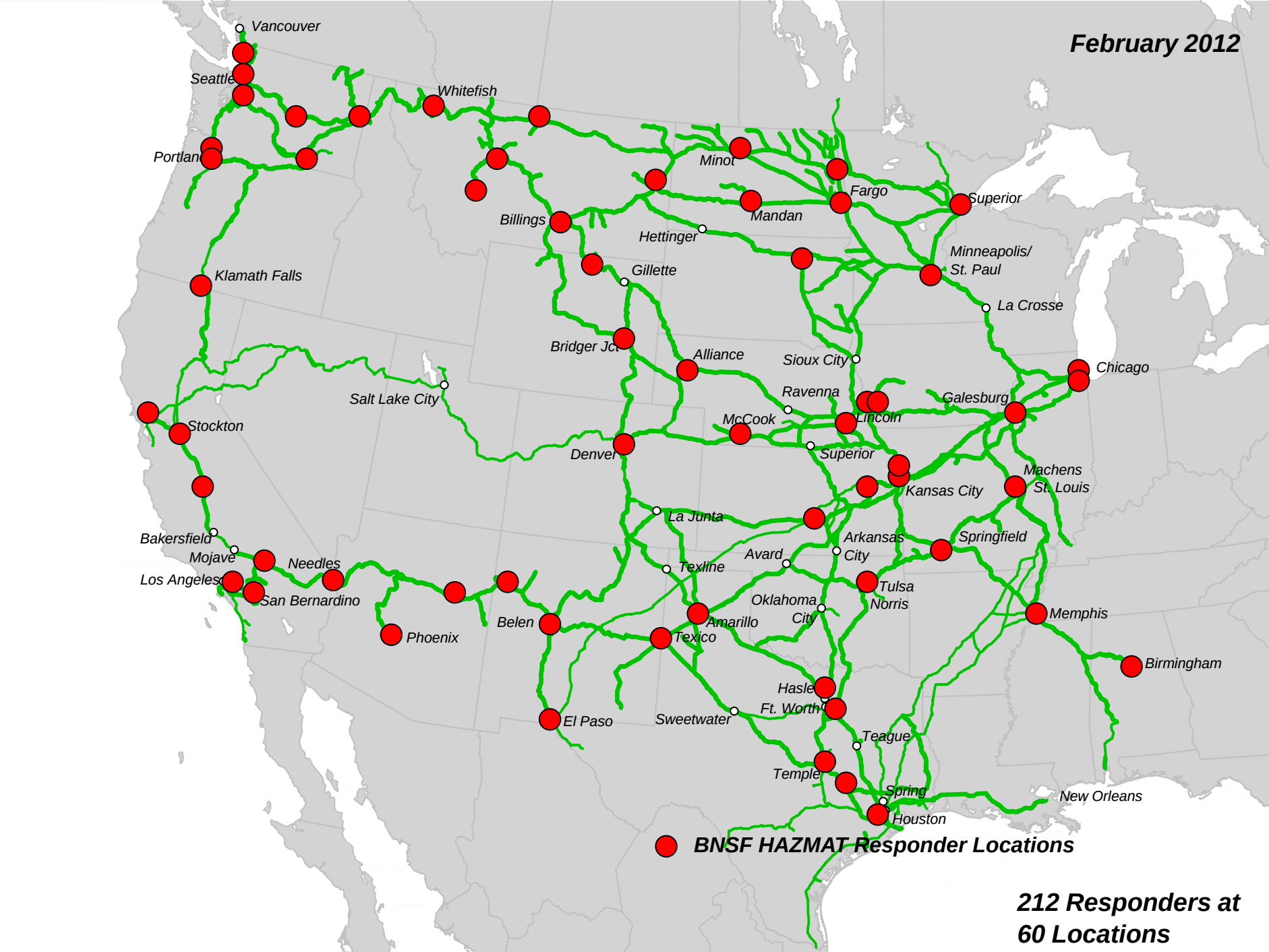
BNSF hazardous material responders protect the safety of our employees, our communities and BNSF's velocity.

Currently 207 responders at 56 BNSF locations

- **142 Mechanical**
- **29 Environmental / Hazmat**
- **18 Load and Ride Solutions**
- **10 Operating**
- **3 Safety**
- **1 Engineering**
- **4 Intermodal**

Initial Training – 80 Hours

Annual Refresher Training – 32 Hours

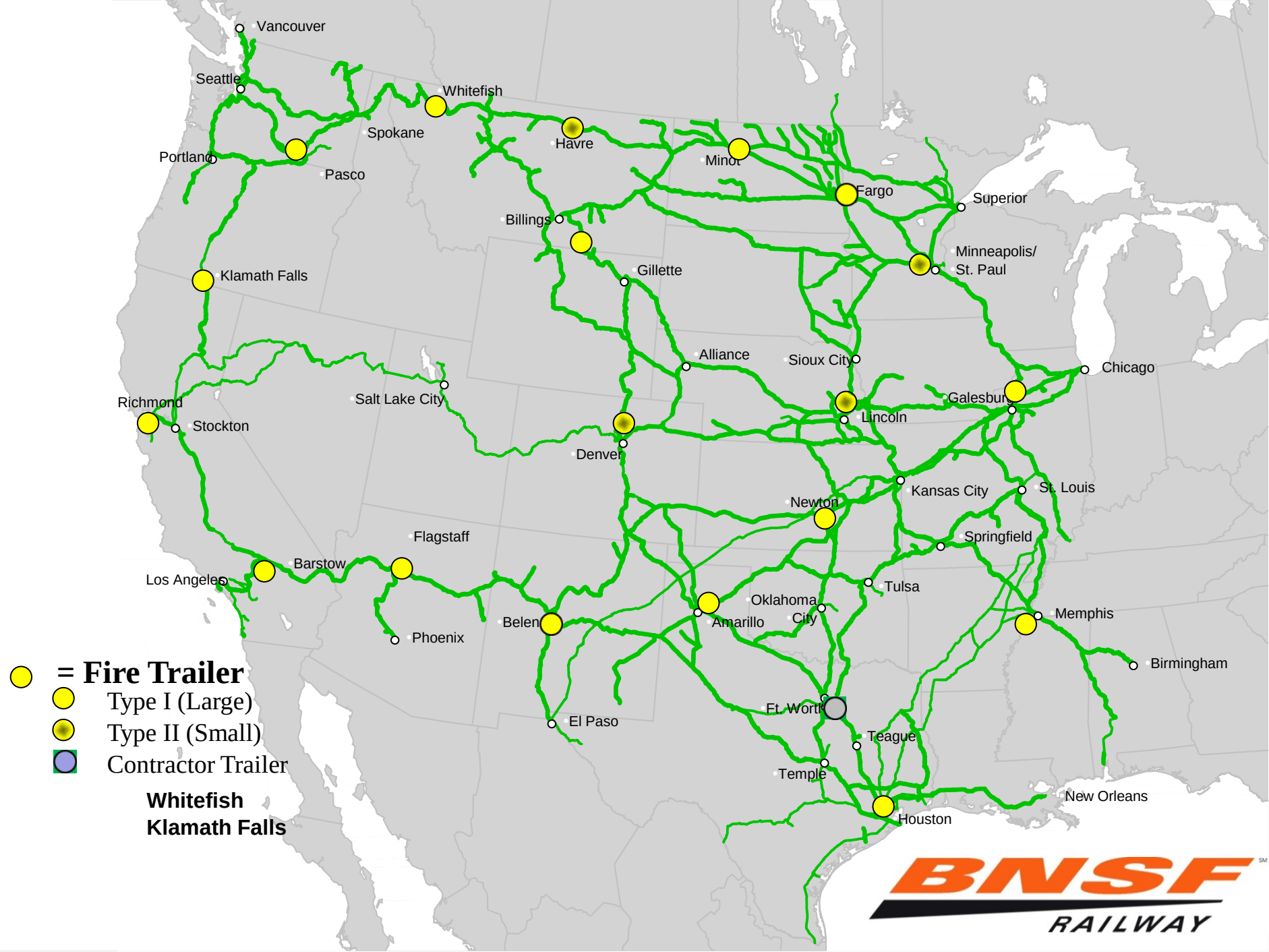

February 2012
Vancouver
Seattle
Whitefish
Portland
Minot
Fargo
Superior
Billings
Mandan
Hettinger
Minneapolis/
St. Paul
Gillette
Klamath Falls
La Crosse
Bridger Jct
Alliance
Sioux City
Chicago
Salt Lake City
Ravenna
Galesburg
Stockton
McCook
Lincoln
Denver
Superior
Machens
St. Louis
Kansas City
La Junta
Bakersfield
Arkansas
City
Springfield
Mojave
Needles
Avard
Texline
Los Angeles
Tulsa
Norris
San Bernardino
Oklahoma
City
Memphis
Belen
Amarillo
Phoenix
Texico
Birmingham
Hasle
Ft. Worth
El Paso
Sweetwater
Teague
Temple
Spring
New Orleans
Houston
BNSF HAZMAT Responder Locations
212 Responders at
60 Locations

BNSF Fire Fighting Foam Trailers

Hazmat Fire Fighting Foam Trailers

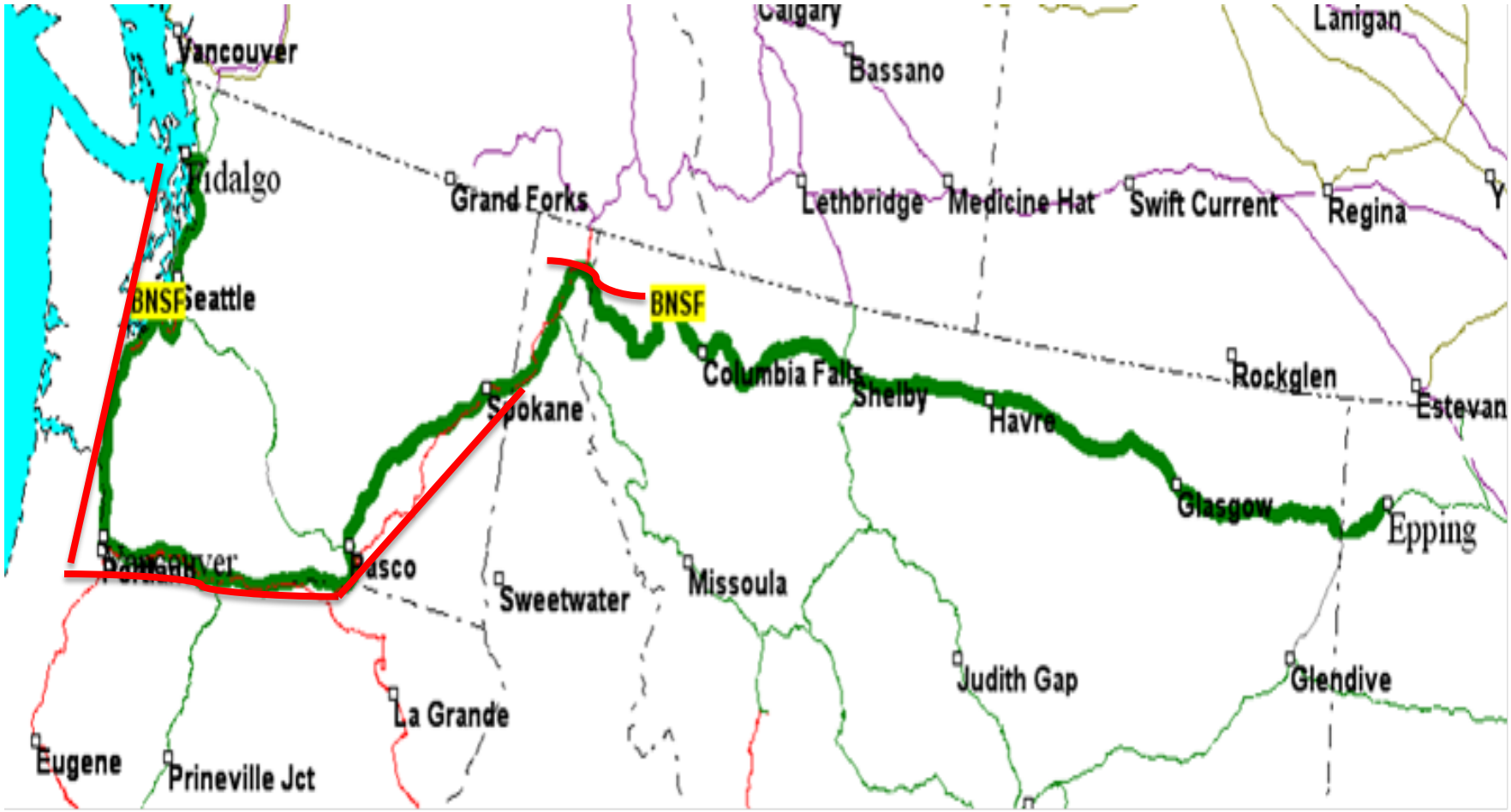
QTY	UNIT	ITEM
1	EA	18' FLATBED TRAILER (14,000 LB GVW)
1	EA	ENCLOSED STORAGE BOX
2	EA	10,000 GALLON FRAMELESS PORTABLE WATER TANK
2	EA	275 GALLON TOTE W/3%AR-AFFF FOAM
2	EA	625 GPM FIRE PUMPS
2	EA	FUEL TANKS FOR FIRE PUMPS
4	EA	4"X12' SECTIONS SUCTION HOSE W/ CAMLOCK FITTINGS
2	EA	SUCTION HOSE STRAINERS
1	EA	DECK GUN MASTER STRAEM SYSTEM W/2 INLETS
1	EA	DECK GUN MONITOR W/TILLERMAN'S HANDLE
1	EA	DECK GUN ADJUSTABLE FOG NOZZLE 1000 GPM
2	EA	FOAM EDUCTING MASTER STREAM NOZZLE W/ PICKUP TUBES
1	EA	HYDRANT WRENCH
2	EA	SMALL SPANNER WRENCES
2	EA	LDH SPANNER WRENCHES
1	EA	GROUND SET PORTABLE MONITOR W/ BASE
1	EA	HIGH EXPANSION FOAM HANDLINE NOZZLE
2	EA	30-200 ADJUSTABLE GPM 1-1/2" HANDLINE NOZZLES
1	EA	95-250 ADJUSTABLE GPM 2-1/2" HANDLINE NOZZLE
2	EA	1-1/2 FOAM EDUCTORS W/ PICKUP TUBES
10	EA	50' SECTIONS 1-3/4" FIRE HOSE
10	EA	50' SECTIONS 2-1/2" FIRE HOSE
2	EA	2-1/2" x1-1/2" GATED WYE
2	EA	4" STORZ x 5" STORZ
2	EA	4" STORZ x 4" NST
2	EA	SIAMESE (4" STORZ/ 2-2-1/2 FEMALE)
1	EA	WYE (4" STORZ / 2-2-1/2" MALE)
3	EA	4" PVC UTILITY VALVES, FM x M CAMLOCK
2	EA	2-1/2" FMNST x 1-1/2" MNST REDUCER
2	EA	1-1/2" DOUBLE MALE
2	EA	1-1/2" DOUBLE FEMALE
2	EA	2-1/2" DOUBLE MALE
2	EA	1-1/2" DOUBLE FEMALE
1	EA	4" DOUBLE FEMALE CAMLOCK
1	EA	4" CAMLOCK x 2-1/2 NST
2	EA	4" CAMLOCK CAPS
2	EA	4" CAMLOCK PLUGS
1	EA	WHEEL CHOCK & CONE
1	EA	10 LB DRY CHEMICAL EXTINGUISHER W VEHICLE MOUNT BRACKET

BNSF RAILWAY

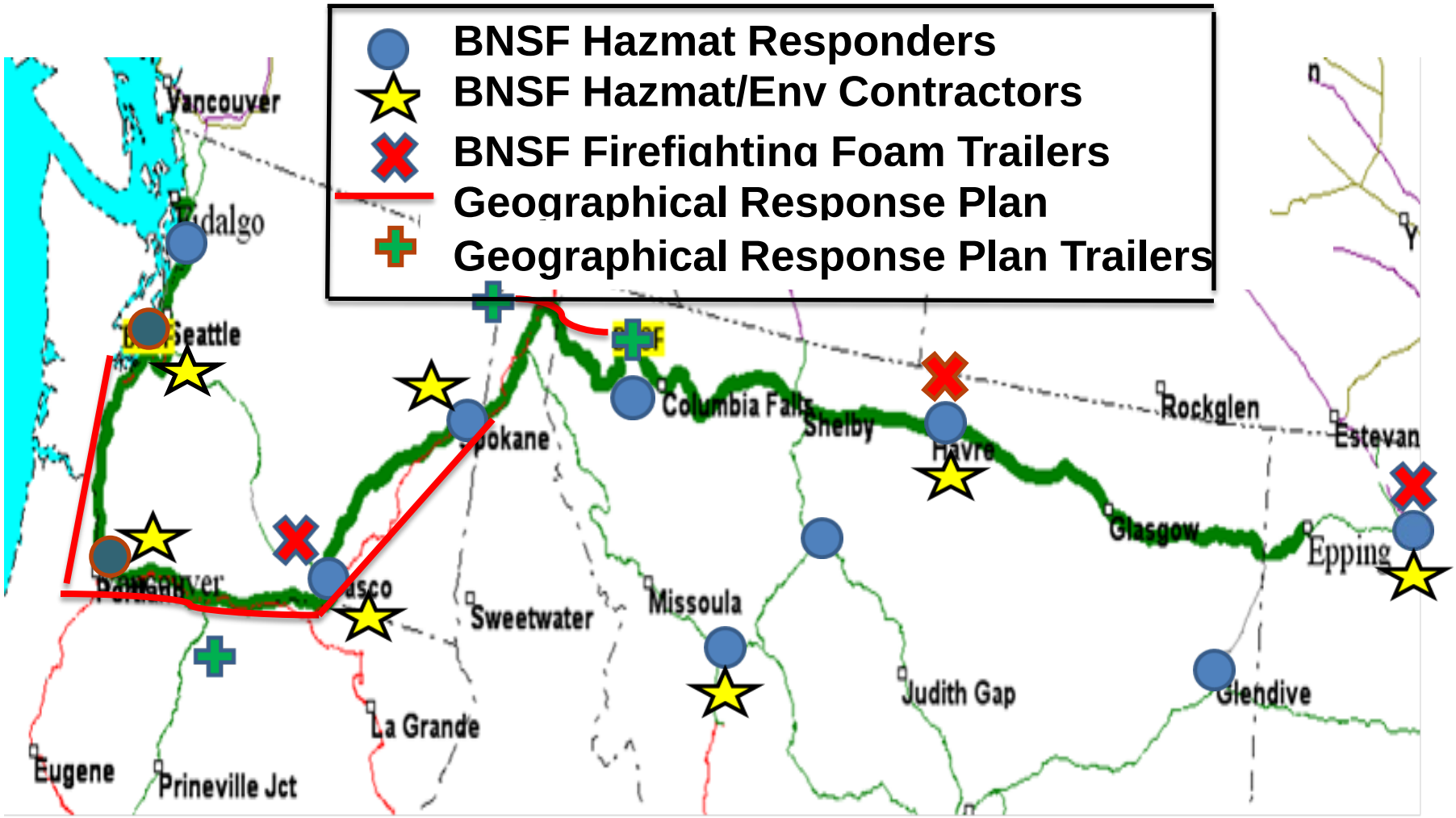

Vancouver
Seattle
Whitefish
Spokane
Havre
Portland
Pasco
Minot
Fargo
Superior
Billings
Minneapolis/
St. Paul
Gillette
Klamath Falls
Alliance
Sioux City
Chicago
Richmond
Salt Lake City
Galesburg
Stockton
Lincoln
Denver
Kansas City
St. Louis
Newton
Flagstaff
Springfield
Barstow
Los Angeles
Tulsa
Oklahoma
City
Amarillo
Belen
Memphis
Phoenix
Birmingham
Ft. Worth
El Paso
Teague
Temple
New Orleans
Houston
= Fire Trailer
Type I (Large)
Type II (Small)
Contractor Trailer
Whitefish
Klamath Falls
BNSF
RAILWAY

BNSF Planning and Emergency Response
ND to PNW - BNSF Firefighting Foam Trailers

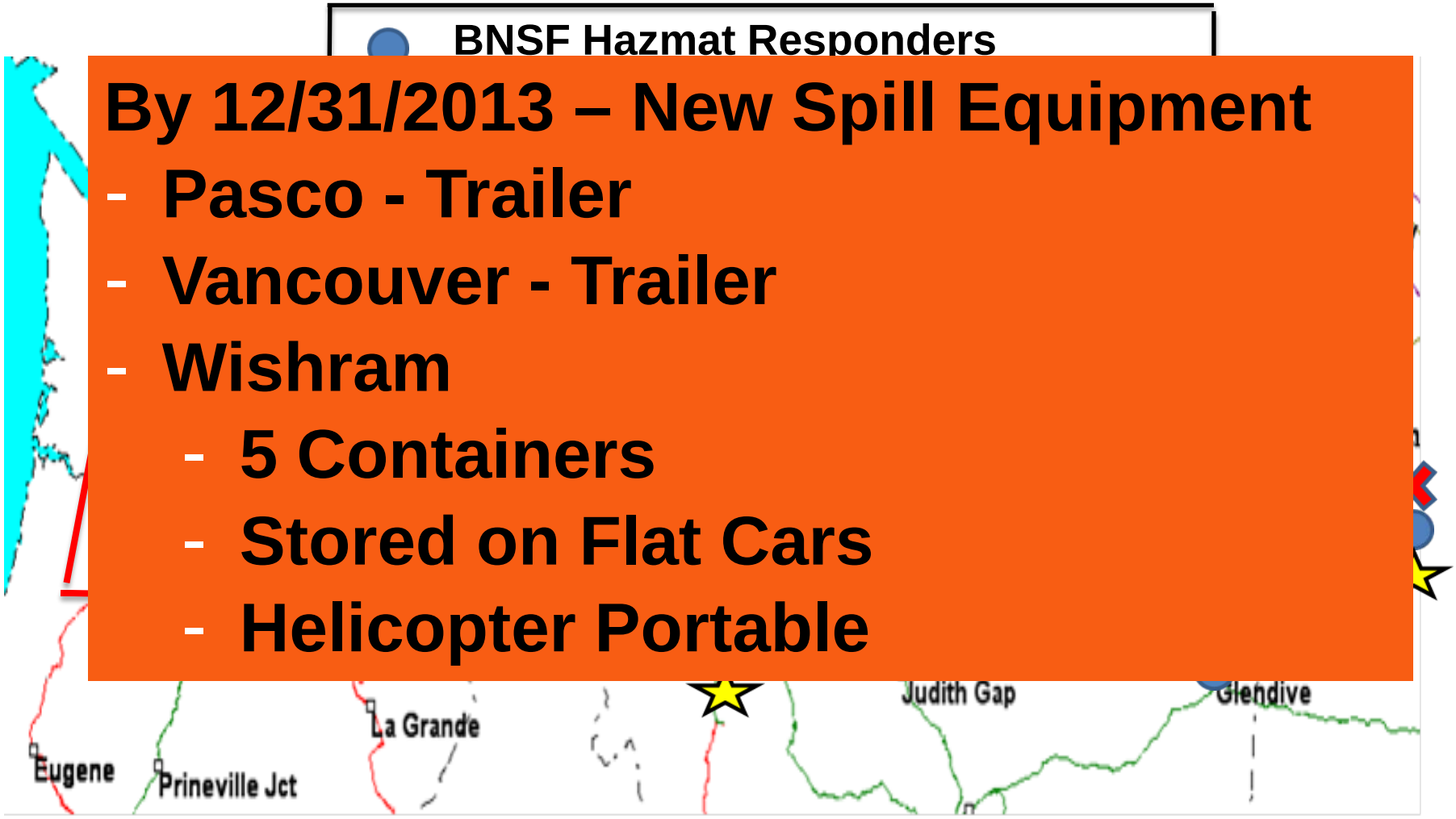
BNSF Planning and Emergency Response
ND to PNW - Geographical Response Plans (GRP)



BNSF Planning and Emergency Response
ND to PNW - All Assets



BNSF Planning and Emergency Response
ND to PNW - All Assets



By 12/31/2013 – New Spill Equipment

- **Pasco - Trailer**
- **Vancouver - Trailer**
- **Wishram**
  - **5 Containers**
  - **Stored on Flat Cars**
  - **Helicopter Portable**

THE RAILROAD WILL TAKE IT FROM HERE